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(54) Title: A METHOD OF EFFICIENT PERFORMANCE MONITORING FOR SYMMETRIC MULTI-THREADING SYSTEMS

(57) Abstract: Efficient performance monitoring for symmetric multi-threading systems is applicable to systems that have limited performance monitoring resources and enables efficient resource sharing on a per-execution unit basis. The performance monitoring unit being shared is programmed to reset its counter and to start performance monitoring operation if there is only one execution unit requesting this operation. In case there are several requests pending, an attempt is made to program the performance monitoring unit to collect performance data for a subset of execution units the hardware is capable to support. Upon a request to stop performance monitoring operation the previously allocated indicator may be removed, and the performance monitoring unit may be programmed to stop operating if there are no more active or pending requests. In case the performance monitoring was inactive for the current execution unit, this request may be discarded, and no performance data may be returned.